

# [AUTOMATIC THRESHOLD VOLTAGE CONTROL CIRCUIT AND SIGNAL CONVERTING CIRCUIT AND METHOD THEREOF]

## Abstract

An automatic threshold voltage control circuit is provided. The circuit comprises a first capacitor, a clock generator, and a switching capacitor network. Wherein the switching capacitor network, receives an analog signal and a plurality of clock signals from the clock generator, where the switching capacitor network stores a portion of charges of the analog signal according to one clock signal, and outputting the portion of charges in according to another clock signal. The portion of charges being associated with the first capacitor generates a threshold voltage. A plurality of sensor control switches is adopted in the present invention in replace of the resistor in the conventional RC filter. Hence, it can be easily integrated into one chip and number of the external devices is reduced, so that hardware costs down. In addition, RC constant can be adjusted by tuning the frequency of the clock signal.